

### **Amendments to the Drawings**

The attached Appendix contains replacement and annotated sheets of drawings that include changes to FIGS. 1 and 4.

In FIG. 1: the reference numbers "10" and "18" have been replaced by --11-- and --19-- , respectively; the second instance of reference number "10" appearing in the target image 16 has been replaced by --13--; the location pointed to by the second instance of reference number "10" has been shifted to correspond to the object location 10 in the reference image 14; and the origin of the displacement vector  $\mathbf{d}_m$  has been moved to the center of the location now labeled "13".

In FIG. 4, the reference numbers "12", "14", "16", "18", "20", and "10" have been replaced by --25--, --26--, --28--, --30--, and --32--, respectively

Appendix: Replacement Sheet  
Annotated Sheet Showing Changes

## Remarks

### I. Status of claims

Claims 1-17 were pending.

Claim 8 has been canceled without prejudice.

Dependent claims 18-20 have been added.

### II. Information disclosure statement

Applicant requests that the Examiner consider the references listed on the attached forms PTO/SB/08A and PTO/SB/08B, which are being filed together with this Amendment.

Application also requests that the Examiner consider the information contained in the file histories of the following co-pending applications:

- U.S. Application No. 11/403,989, filed April 13, 2006; and
- U.S. Application No. 11/445,002, filed June 1, 2006.

### III. Objections to the drawings

The drawings have been amended in a manner that addresses the Examiner's concerns.

The objections to the drawings now should be withdrawn.

The specification has been amended to reflect the changes made to the drawings.

### IV. Claim rejection under 35 U.S.C. § 101

The Examiner has rejected claim 17 under 35 U.S.C. § 101.

Claim 17 has been amended in a manner that renders the Examiner's concerns in the regard moot.

### V. Claim rejection under 35 U.S.C. § 112

The Examiner has rejected claim 17 under 35 U.S.C. § 112, second paragraph.

Claim 17 has been amended in a manner that renders the Examiner's concerns in the regard moot.

VI. Claim rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-3, 5, 6, 8, 9, 13, 14, and 17 under 35 U.S.C. § 102(b) over Minami (U.S. 6,380,986).

A. Claims 1-3, 5, 6, 8, and 9

Independent claim 1 has been amended and now recites

1. A method for estimating a displacement of an object appearing in a first image and a second image, comprising:
  - ascertaining a respective candidate location of the object in each of a plurality of search regions in the second image;
  - for each of the search regions, determining a respective candidate displacement vector relating the respective candidate location of the object and a location of the object in the first image;
  - associating a respective confidence value with each of the candidate displacement vectors; and
  - providing the estimated displacement of the object based at least in part on an evaluation of the confidence values.

Minami does not disclose “associating a respective confidence value with each of the candidate displacement vectors,” nor does Minami disclose “providing the estimated displacement of the object based at least in part on an evaluation of the confidence values,” as now recited in claim 1. In accordance with the various motion vector search methods that are disclosed in Minami, a reference vector indicating the movement of the overall image is determined in a wide area of an image, for each template a respective displacement vector is determined in each search area, and for each template the reference vector and the respective displacement vector are summed to produce the motion vector for the template (see, e.g.: col. 5, lines 51-60; col. 8, lines 15-65; FIG. 2). Minami does not even hint that a respective confidence value is associated with either the displacement vector or the sum of the displacement vector and the reference vector. Consequently, Minami cannot possibly disclose that an estimated displacement of an object appearing in the images is provided based at least in part on an evaluation of such confidence values.

For at least these reasons, the rejection of independent claim 1 under 35 U.S.C. § 102(b) over Minami now should be withdrawn.

In support of the rejection of claim 1, the Examiner has stated that Minima discloses

...measuring the validity of each of the plurality of estimated object displacements (column 3, lines 36-41, i.e. minimum computed value of the sum of the absolute values of differences as disclosed in column 1, lines 66-67 and column 2 lines 1-5 for each search region)...

The “sum of an absolute value of differences” referred to in col. 3 lines 36-41, col. 1, lines 66-67, and col. 2 lines 1-5, however, is simply the “search parameter” that is used to identify the location in the search area that best matches the template; the best match location then is used to determine the motion vector (see, e.g., col. 1, lines 47-56). Minami does not associate such a search parameter with the motion vector. Indeed, Minami does not disclose that such a search parameter is used in any way whatsoever after the motion vector for the template has been determined.

Each of claims 2, 3, 5, 6, 8, and 9 incorporates the elements of independent claim 1 and therefore is patentable over Minami for at least the same reasons explained above.

B. Claims 13 and 14

Independent claim 13 has been amended and now recites elements that essentially track the pertinent elements of independent claim 1 discussed and therefore is patentable over Minami for at least the same reasons explained above.

Claim 14 incorporates the elements of independent claim 13 and therefore is patentable over Minami for at least the same reasons explained above.

C. Claim 17

Independent claim 17 has been amended and now recites elements that essentially track the pertinent elements of independent claim 1 discussed and therefore is patentable over Minami for at least the same reasons explained above.

VII. Claim rejections under 35 U.S.C. § 103

A. Claims 4, 7, 15, and 16

The Examiner has rejected claims 4, 7, 15, and 16 under 35 U.S.C. § 103(a) over Minami in view of Sim (U.S. 6,912,296).

Each of claims 4 and 7 incorporates the elements of independent claim 1. Sim does not make-up for the failure of Minami to disclose or suggest the elements of independent claim 1 discussed above. Therefore claims 4 and 7 are patentable over Minami in view of Sim for at least the same reasons explained above in connection with independent claim 1.

Each of claims 15 and 16 incorporates the elements of independent claim 13. Sim does not make-up for the failure of Minami to disclose or suggest the elements of independent claim 13 discussed above. Therefore claims 15 and 16 are patentable over Minami in view of Sim for at least the same reasons explained above in connection with independent claim 13.

B. Claim 10

The Examiner has rejected claim 10 under 35 U.S.C. § 103(a) over Minami in view of Hanna (U.S. 2001/0019621).

Claim 10 incorporates the elements of independent claim 1. Hanna does not make-up for the failure of Minami to disclose or suggest the elements of independent claim 1 discussed above. Therefore claim 10 is patentable over Minami in view of Hanna for at least the same reasons explained above in connection with independent claim 1.

C. Claims 11 and 12

The Examiner has rejected claims 11 and 12 under 35 U.S.C. § 103(a) over Minami.

Each of claims 4 and 7 incorporates the elements of independent claim 1 and therefore is patentable over Minami for at least the same reasons explained above in connection with independent claim 1.

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VIII. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

Charge any excess fees or apply any credits to Deposit Account No. 08-2025.

Respectfully submitted,

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